



A.D. 1835 N^o 6787.

S P E C I F I C A T I O N

OF

WILLIAM NEWTON.

PREPARING AND PRESERVING MILK.

LONDON:

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Preparing and Preserving Milk.

NEWTON'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, WILLIAM NEWTON, of Chancery Lane, in the County of Middlesex, Civil Engineer, send greeting.

WHEREAS His present most Excellent Majesty King William the Fourth,
5 by His Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Eleventh day of March, in the fifth year of His reign, and in the year of our Lord One thousand eight hundred and thirty-five, did give and grant unto me, the said William Newton, my executors, administrators, and assigns, His especial license, full power, sole privilege and authority, that I,
10 the said William Newton, my executors, administrators, and assigns, or such others as I, the said William Newton, my executors, administrators, or assigns, should at any time agree with, and no others, from time to time and at all times hereafter during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-
15 Tweed, an Invention of "**A METHOD OF PREPARING ANIMAL MILK, AND BRINGING IT INTO SUCH A STATE AS SHALL ALLOW OF ITS BEING PRESERVED FOR ANY LENGTH OF TIME WITH ITS NUTRITIVE PROPERTIES, AND CAPABLE OF BEING TRANSPORTED TO ANY CLIMATE FOR DOMESTIC OR MEDICINAL USES,**" being a communication made to me by a certain foreigner resident abroad; in which said Letters Patent is
20 contained a proviso obliging me, the said William Newton, by an instrument in writing under my hand and seal, particularly to describe and ascertain the nature of the said Invention, and in what manner the same is to be performed, and to cause the same to be inrolled in His Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said
25 in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

Newton's Improvements in Preparing and Preserving Milk.

NOW KNOW YE, that in compliance with the said proviso, I, the said William Newton, do hereby declare that the nature of the said Invention, and the manner in which the same is to be performed, are particularly described and ascertained in and by the following description thereof (that is to say):—

The Method of Preparing Animal Milk, and bringing it into such a State as 5 shall allow of its being preserved for any Length of Time with its Nutritive Properties, and capable of being Transported to any Climate for Domestic or Medicinal Purposes, consists in simply evaporating the aqueous parts from the liquid milk, and leaving the other constituent parts of the milk in a concentrated state, unaltered by any chemical change, which I effect in the following 10 manner:—Taking the milk in a fresh state, as drawn from the animal, having first strained it, if necessary, to get rid of any dirt or other improper matter which may have accidentally fallen into the pail or other vessel while milking, I introduce into the milk a small quantity of pulverised loaf sugar, say from 15 fiftieth to one hundredth part in weight of the whole quantity of the milk, which quantity may however be greater, dependant upon the desired sweetness of the preparation when completed. On the sugar becoming perfectly dissolved I subject the milk to a tolerably rapid evaporation, either by blowing through the milk 20 warm or cold air by means of a suitable apparatus of any convenient form, such, for instance, as those at present in use for evaporating syrups, or by means of external warmth in connexion with a vacuum above the surface, produced in any of the ordinary ways as applied to evaporation. By whatever process, however, the evaporation is carried on, the milk may with advantage be subjected to a gentle warmth to quicken the operation, but that warmth 25 will be best obtained from hot water or from steam, or heated air, applied to the outside of the vessel which contains the milk, as the direct action of fire upon the vessel may tend to injure the properties of the milk, and perhaps give it an unpleasant flavor. By evaporating the aqueous particles of the milk in this way, its nutritive or essential parts may be concentrated, and its substance reduced to the consistency of cream, honey, or soft paste, or even into dry 30 cakes or powder, and may in the latter states be exposed to the air for a length of time without being impaired, the sugar tending to preserve it. By dissolving the milk so prepared in a proportionate quantity of warm or cold water the original milk is reproduced, with all its properties, original flavor, and salutary qualities. It is desirable to dilute the concentrated milk at first in a small 35 portion of water, and to add afterwards the necessary quantity to bring it into the liquid state, otherwise it would be difficult to dissolve the milk completely. This process of preparing milk affords the means of conveying it, without injury, to any distance, in any climate, and of retaining, by concentration, the

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delicious flavor of the milk peculiar to one country, and reproducing it in another with its original qualities. When evaporated to the consistency of paste, it may be taken as food by persons who, on account of the weakness of their digestive organs, cannot take milk in its liquid state. It is obvious that every
5 kind of animal milk may be prepared in the same manner, whether it comes from the cow, the goat, the ass, or even from the human breast. When evaporated to the consistency of a syrup it may be put in bottles or phials; when concentrated to the consistence of honey, in suitable pots; when brought to that of a thick paste it may be shaped into lozenges or dried and reduced to powder.
10 Milk so prepared may, without losing any of its properties, be afterwards combined with any medicinal, aromatic, or nutritious substances. When reduced into powder, milk may be advantageously mixed with cocoa, and dried into cakes, and by diluting it with warm water will give excellent chocolate. When brought to the consistence of honey, it may be mixed with a strong infusion
15 of coffee, or of tea, and being further evaporated will keep, and afterwards yield, when dissolved with warm water, coffee or tea of the usual strength and flavor. This improved method of preparing milk is essentially different from all preparations of milk heretofore known, and is particularly unlike the preparation described by Mons. Braconneau, inasmuch as milk prepared upon
20 his plan is decomposed, while by my process it is only concentrated, without being chemically changed. The process of Mons^r. Braconneau consists in separating, by means of an acid, the serum from the other constituents of milk, and adding to the residuum (viz., the caseum and the butyrous substance) a sufficient quantity of carbonate of soda to render it soluble in liquid. The
25 milk so prepared must be recomposed for use, but it never can be brought to the perfect flavor and condition of real good milk, as many of its original properties are necessarily destroyed or modified, however exact the analysis and however great the skill of the operator; on the contrary, the milk thus prepared by me undergoes no chemical change, but its constituent substances
30 are merely concentrated, by driving off or evaporating the aqueous parts, and the milk with all its original flavor and nutritious qualities will be again restored by the addition of simple water.

In witness whereof, I, the said William Newton, have hereunto set my hand and seal, this day of September, in the year of our Lord One
35 thousand eight hundred and thirty-five.

WILLIAM (L.S.) NEWTON.

Newton's Improvements in Preparing and Preserving Milk.

UNDERHILL, Extra.

AND BE IT REMEMBERED, that on the Eighth day of September, in the sixth year of the reign of His Majesty King William the Fourth, the said William Newton came before our said Lord the King in His Chancery, and acknowledged the Instrument aforesaid, and all and every thing therein contained and specified, in form above written. And also the Instrument aforesaid was stamped according to the tenor of the Statute made in the fifty-fifth year of the reign of His late Majesty King George the Third. 5

Inrolled the Ninth day of September, One thousand eight hundred and thirty-five.

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